



EXPLANATION

11

Unit 11

Unconsolidated alluvium with minor amount of gravel; cuts and excavations subject to sliding and sluffing.

10

Unit 10

Unconsolidated colluvium; subject to creep and slides.

9

Unit 9

Unconsolidated pebbles and cobbles in sand and clay; cuts and steep slopes subject to sliding and sluffing.

8

Unit 8

Shaly soil overlying interbedded shale and sandstone; cuts subject to sliding and sluffing.

7

Unit 7

Residual soil overlying shale and argillaceous limestone; subject to severe erosion.

6

Unit 6

Variable soil thickness overlying limestone and dolomite; locally, high shrink-swell clay; sinkholes and solution channels common.

5

Unit 5

Variable soil thickness, rapid lateral thickness change; underlain by limestone, dolomite, shale, siltstone, and thin sandstone; locally, high shrink-swell clay; small sinkholes common.

4

Unit 4

Acid sandy soil underlain by sandstone and quartzite; slides common on steep slopes.

3

Unit 3

Acid sandy soil underlain by phyllite, sandstone, and conglomerate; steep slopes subject to sliding and sluffing.

2

Unit 2

Variable-depth residual soils underlain by greenstone, buff, epidiorite, and metasedimentary rocks; moderate to steep slopes subject to creep and minor slides.

1

Unit 1

Residual soils underlain by granite rocks; low shrink-swell clay; steep slopes subject to small slides.

rf

Rockfalls

Area of actual or potential rockfalls.

Caves

Area containing one or more known cave openings.

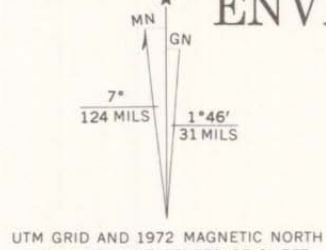
X Sinkhole; 20 feet (6 m) or more in diameter

— Drainage divide

• Well drilled for water; number refers to Table 5; approximate location

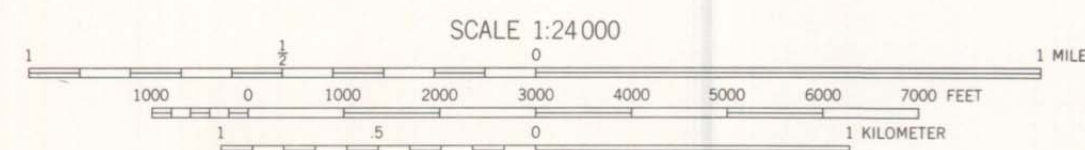
• 29 a-c Spring; number refers to Table 5

Base map from U.S. Geological Survey, 1967—(72 PR)
Front Royal Quadrangle, 7 1/2 Minute Series



ENVIRONMENTAL GEOLOGY MAP OF THE FRONT ROYAL QUADRANGLE, VIRGINIA

Geology by Eugene K. Rader and Thomas H. Biggs



1975

Williams & Heintz Map Corporation
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